

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

9771 Clairemont Mesa Blvd., Ste. B
San Diego, California 92124-1331
Telephone: (619) 265-5114



File Shell Oil Co.

May 29, 1987

Mr. Frank R. Fossati
Senior Area Engineer
Shell Oil Company
P.O. Box 4848
Anaheim, California 92803

Dear Mr. Fossati:

CLEANUP AND ABATEMENT ORDER NO. 87-94

Enclosed is Cleanup and Abatement Order No. 87-94. This Cleanup and Abatement Order is being issued under the authority of California Water Code Section 13304 to Shell Oil Company in response to the unauthorized release from the underground fuel storage tank system at 5820 Mission Gorge Road in San Diego. The unauthorized release at the Shell Oil Company service station has resulted in the presence of soil contamination and has caused the pollution of the underlying ground water.

Basically, the Cleanup and Abatement Order directs Shell Oil Company to clean up the contamination resulting from the unauthorized petroleum hydrocarbon release. The Order requires Shell Oil Company to submit quarterly progress reports to this office, until, in the opinion of the Executive Officer, the cleanup can be considered complete. The first quarterly progress report is due no later than July 30, 1987. A copy of these progress reports should also be sent to the County of San Diego Department of Health Services.

At some future time prior to the final phase of cleanup, the Cleanup and Abatement Order also directs Shell Oil Company to develop, design and cost alternative cleanup strategies for a range of potential final cleanup levels. The Order directs Shell Oil Company to implement the final cleanup alternatives selected by the Regional Board after staff's review of the cleanup alternatives developed and submitted by the discharger.

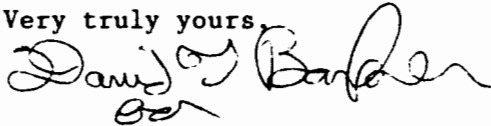
The issuance of this Cleanup and Abatement Order to Shell Oil Company will be discussed at the June 15, 1987 Regional Board meeting. This meeting is open to public participation and you are welcome to attend. It is scheduled for 9:00 a.m. at the State Office Building, Room B109, 1350 Front Street, San Diego.

May 29, 1987

Finally, we have received and reviewed your site assessment proposal dated March 5, 1987 and prepared by Nachant Environmental, Incorporated. I have no objections to the site assessment proposal. Depending on the results of this investigation, additional work may be required by this agency.

If you have any questions, please call Mr. Scott Hugenberger at the above number.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Ladin H. Delaney", written over the typed name.

LADIN H. DELANEY
Executive Officer

SGH:vn

cc: Ms. Victoria Gallagher
Hazardous Materials Management Unit
County of San Diego Dept. of Health Services
1700 Pacific Highway
San Diego, CA 92101

State Water Resources Control Board
Division of Water Quality
Mr. Archie Matthews
Sacramento

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

CLEANUP AND ABATEMENT ORDER NO. 87-94

SHELL OIL COMPANY
5820 MISSION GORGE ROAD, SAN DIEGO
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region
(hereinafter Regional Board) finds that:

1. Shell Oil Company owns and operates a retail service station at 5820 Mission Gorge Road in San Diego. The site lies in the Mission San Diego Hydrographic Subarea of the lower San Diego Hydrographic Subunit.
2. In April, 1986 the City of San Diego discovered the presence of soil contamination while they were excavating for some water pipe work adjacent to the Shell Service Station on Mission Gorge Road. The results of chemical analyses on soil samples collected by the City of San Diego in May 1986 showed the presence of over 25 mg/kg of toluene and xylenes and as much as 297 mg/kg acetone and 162 mg/kg methyl ethyl ketone. It is not known at this time whether these last two components are oxidized fuel components or simply laboratory contamination.
3. On November 20, 1985 this office was notified by the County of San Diego Department of Health Services (SDCDHS) of an unauthorized release of fuel hydrocarbons from the underground gasoline storage tank system at the 5820 Mission Gorge service station. Fuel contaminated soil was observed by a SDCDHS representative during the removal of four underground tanks on November 14, 1985.
4. On May 28, 1986 this office received a report from Shell Oil Company dated May 14, 1986 and prepared by Hydro-Fluent, Incorporated. The report contained the following information:
 - a. Three borings were installed at the Shell Oil Company service station on May 8, 1986.
 - b. Soil samples collected from Boring B-2 at a depth of 15 feet and 20 feet were analyzed and found to contain 1250 ppm and 650 ppm of total fuel hydrocarbons, respectively.
 - c. A ground water sample collected from boring B-3 was analyzed and found to contain 712 ppm total fuel hydrocarbons.
5. On March 10, 1987 Shell Oil Company submitted to this office a proposal for a site assessment investigation dated March 5, 1987. The site assessment plan proposes to install at least five monitoring wells on the site. Depending on the results of the investigation, additional work may be needed.

6. Except where otherwise specified in this Cleanup and Abatement Order, "contamination" shall be defined as follows:

"Contamination refers to soil or ground water which contains waste or waste constituents which are not naturally occurring, or which contain waste or waste constituents in concentrations exceeding the naturally occurring background concentrations."

7. Section 13050(1) of the California Water Code defines "pollution" and "contamination" as follows:

"Pollution means an alteration of the quality of the waters of the State by waste to a degree which unreasonably affects (1) such waters for beneficial uses, or (2) facilities which serve such beneficial uses."

"Contamination means an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" shall include any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected."

8. The *Comprehensive Water Quality Control Plan Report, San Diego Basin (9)* (Basin Plan) was adopted by this Regional Board on March 17, 1975; approved by the State Water Resources Control Board on March 20, 1975; and updated by the Regional Board on February 27, 1978; March 23, 1981; January 24 and October 3, 1983; and August 27, 1984. The 1978, 1981, 1983 and 1984 updates were subsequently approved by the State Board.
9. The Basin Plan established the following uses as the potential and existing beneficial uses for the ground water in the Mission San Diego Hydrographic Subarea of the Lower San Diego Hydrographic Subunit:
- a. Municipal and domestic supply
 - b. Agricultural supply
 - c. Industrial service supply
 - d. Industrial process supply
10. The Basin Plan established the following uses as the potential and existing beneficial uses for the surface waters in the Lower San Diego Hydrographic Subunit:
- a. Municipal and domestic supply
 - b. Industrial service supply
 - c. Ground water recharge
 - d. Water contact recreation
 - e. Non-contact water recreation
 - f. Warm fresh-water habitat
 - g. Cold fresh-water habitat
 - h. Wildlife habitat
 - i. Preservation of rare and endangered species

11. To protect the beneficial uses listed in Finding 9, it is necessary that the ground water underlying the demolished service station site not contain constituents in concentrations exceeding the following levels:

<u>Constituent</u>	<u>Maximum Allowable Concentration</u>
Total Xylenes	620 µg/L
Benzene	0.7 µg/L
Toluene	100 µg/L
Ethylbenzene	680 µg/L
Total Petroleum Hydrocarbons	1.0 mg/L
Total Lead	50 µg/L

12. The unauthorized release of petroleum hydrocarbons at the Shell Oil Company Service Station site has caused a "pollution" and a "contamination" of the State's waters as defined in Finding 7 in that the ground water underlying the site contains petroleum hydrocarbon constituents in concentrations exceeding the levels listed in Finding 11. Thus, the municipal and domestic supply beneficial use of the ground water in the Mission San Diego Hydrographic Subarea has been impaired.
13. The quality of the ground water underlying 5820 Mission Gorge Road is subject to the provisions of the State Water Resources Control Board's Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California* (hereinafter referred to as the Nondegradation Policy). Under the terms and conditions of the Nondegradation Policy, the existing (pre-discharge) ground water quality of the Lower San Diego Hydrographic Subunit must be maintained unless it is demonstrated that a decrease in water quality (1) will be consistent with maximum benefit to the people of the state, (2) will not unreasonably affect beneficial uses, and (3) will not result in water quality less than prescribed in the Basin Plan or other adopted policies.
14. This enforcement action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with Section 15321, Chapter 3, Title 14, California Administrative Code.

IT IS HEREBY ORDERED, That pursuant to Section 13304 of the California Water Code, Shell Oil Company (hereinafter the discharger) shall comply with the following Directives:

1. The discharger shall submit a report to this office no later than July 30, 1987 characterizing the vertical and horizontal extent of the petroleum hydrocarbon contamination resulting from the unauthorized release from the underground storage tank systems at the Shell Oil Company service station. The report shall contain the following information:

- a. A site map showing the location of all borings and monitoring wells, the locations of the excavated tanks, and any underground utilities that might act as conduits along which the petroleum hydrocarbons could migrate.
 - b. The water levels and fuel product thicknesses, if any, in all of the wells.
 - c. A site map showing the hydrologic contours and the boundary of the free product and dissolved product plumes.
 - d. The laboratory results of the chemical analyses on the soil and ground water samples collected during the site investigation.
 - e. A remedial action strategy to clean up the effects of the unauthorized release from the excavated underground storage tank system at the Shell service station site. The strategy should address the removal and/or treatment of the free product plume (if any), the dissolved product ground water plume, and the soil contamination zone.
2. The discharger shall take:
- a. Effective remedial action to immobilize the free product plume, if any, and the dissolved product plume of petroleum hydrocarbon contaminated ground water.
 - b. Effective remedial action to protect the beneficial uses of the San Diego River and of the ground water of the Mission Hydrographic Subarea of the Lower San Diego Hydrographic Subunit.
 - c. Effective remedial action to clean up the petroleum hydrocarbon contaminated ground water and soil to the Regional Board staff's satisfaction.
3. The discharger shall submit monitoring reports to this office on a quarterly basis until, in the opinion of the Regional Board Executive Officer, the site has been cleaned up. The monitoring reports shall describe the progress made in the cleanup operations and shall demonstrate that the petroleum hydrocarbon waste released from the Shell Oil Company service station has been and remains immobilized. The quarterly monitoring reports shall include, but not be limited to, the following information:
- a. Quantity of petroleum hydrocarbon product recovered for the quarter and the total to date.
 - b. Quantity of ground water extracted for the quarter, the total to date, and its ultimate disposal point.
 - c. The water levels and product thicknesses in all of the wells.

- d. Any information necessary to demonstrate that the petroleum hydrocarbon contamination resulting from the unauthorized release from the underground tank system at the site is fully contained and immobilized or shrinking.
- e. A map of the site with hydrologic contours showing the ground water flow pattern and the locations of all of the wells.
- f. A map of the site showing the boundary of the free petroleum hydrocarbon product plume and also of the dissolved product ground water plume.
- g. All ground water samples should be analyzed for:
 - (1) Benzene
 - (2) Toluene
 - (3) Total Xylenes
 - (4) Ethylbenzene
 - (5) Total Petroleum Hydrocarbons
 - (6) Chlorinated Hydrocarbons, if these constituents were contained in the discharge.
 - (7) Organic Lead
- h. A description of the remedial actions employed by the discharger.

The quarterly monitoring reports shall be submitted to this Office in accordance with the following schedule:

<u>Reporting Period</u>	<u>Date Due</u>
January, February, March	April 30
April, May, June	July 30
July, August, September	October 30
October, November, December	January 30

- 4. Upon direction of the Executive Officer at some point in the future, before the hazardous substance spill site cleanup program can be terminated, the discharger shall submit a report to this office identifying and developing a range of remedial action alternatives for the final phase of the cleanup program. The report shall examine and determine the cost of a cleanup strategy capable of achieving each of the following potential final cleanup levels in the affected ground water zone:
 - a. Treatment and/or removal of the polluted ground water to attain the naturally occurring background concentrations for the following constituents in the underlying ground water aquifer:
 - (1) Benzene
 - (2) Toluene
 - (3) Ethylbenzene
 - (4) Total Xylenes
 - (5) Total Petroleum Hydrocarbons
 - (6) Total Lead

This cleanup alternative represents basically complete cleanup of pollution resulting from the petroleum hydrocarbon discharge.

- b. Treatment and/or removal of the polluted ground water to attain the following State Department of Health Services and Regional Board criteria in the underlying ground water aquifer:

<u>Constituent</u>	<u>Maximum Concentration</u>
Benzene	0.7 µg/l
Toluene	100 µg/l
Ethylbenzene	680 µg/l
Total Xylenes	620 µg/l
Total Petroleum Hydrocarbons	1.0 mg/l
Lead	50 µg/l

- c. A remedial action alternative proposing the attainment of petroleum hydrocarbon concentrations less stringent than those specified in (a) and (b). This alternative concedes the affected ground water to a degraded status. It will be necessary to establish, to the satisfaction of the Regional Board, that the petroleum hydrocarbon concentrations being proposed by the discharger under this alternative would comply with the following criteria in accordance with the State's Nondegradation Policy:

- (1) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water pollution zone would not unreasonably affect the beneficial uses listed in Finding 9.
- (2) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water pollution zone will be consistent with the maximum benefit to the people of the state.
- (3) The proposed petroleum hydrocarbon concentrations to be attained in the affected ground water pollution zone will not result in water quality less than prescribed in the Basin Plan or other adopted policies.

All free petroleum hydrocarbon product must be removed under all three alternatives.

5. The cleanup alternatives required under Directive 4 of this Order will be evaluated in detail by Regional Board staff. This evaluation will include technical considerations, estimated costs, and anticipated water quality impacts associated with each alternative. Based on this evaluation a specific set of final cleanup levels will be selected by the Regional Board. Upon notification by the Executive Officer, the discharger shall implement the cleanup strategy capable of achieving the final cleanup levels selected by the Regional Board. If, however, the discharger wishes to implement cleanup alternative 4(a), the discharger will not be required to develop cleanup strategies corresponding to alternative 4(b) and 4(c). If the discharger wishes to implement cleanup

alternative 4(b) and 4(c). If the discharger wishes to implement cleanup alternative 4(b), the discharger will not be required to develop a cleanup strategy corresponding to alternative 4(c).

6. The discharger shall remove and/or treat all soil containing total extractable petroleum hydrocarbons in concentrations exceeding 100 mg/kg, unless the discharger can demonstrate: (a) to the Regional Board staff's satisfaction that higher soil concentrations will not result, under ambient environmental conditions at the site, in waste constituents being released at concentrations which could degrade the quality of the underlying ground water; and (b) to the County of San Diego Department of Health Services that higher soil concentrations will not present a threat to the public or environmental health.
7. The discharger shall dispose of all ground water and/or soil polluted with petroleum hydrocarbons in accordance with all applicable local, state and federal regulations.
8. After the discharger demonstrate to the Regional Board Executive Officer's satisfaction that the final cleanup levels, as determined by the Regional Board under Directives 5 and 6, have been achieved throughout the soil and ground water contamination zones, the discharger shall continue to monitor the ground water and submit quarterly monitoring reports in accordance with Directive 3 of this Order for a period of one year. If at any time during this post-cleanup monitoring the data indicate that the final cleanup levels have not been maintained, the discharger shall immediately resume appropriate remedial cleanup actions. If, on the other hand, the final cleanup levels have not been exceeded for the year of monitoring, then no further monitoring shall be required.

Ordered by

Ladin H. Delaney

Ladin H. Delaney
Executive Officer

Dated: May 29, 1987

SGH:vn

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

9771 Clairemont Mesa Blvd., Suite B
San Diego, California 92124-1331
Telephone: (619) 265-5114



August 22, 1988

Mr. Frank Fossati
Senior Area Engineer
Shell Oil Company
P.O. Box 4848
Anaheim, California 92803


Dear Mr. Fossati:

DIRECTIVE NO. 4, CLEANUP AND ABATEMENT ORDER NO. 87-94

This letter is to follow up on your meeting with Mr. Scott Hugenberger of my staff on August 11, 1988. As you know, on May 29, 1987 Cleanup and Abatement Order No. 87-94 was issued to Shell Oil Company in response to the presence of fuel contamination in the soil and ground water at the Shell service station located at 5820 Mission Gorge Road in San Diego. In accordance with Directive No. 4, I am requesting that Shell Oil Company submit the report required by Directive No. 4 to this office no later than November 30, 1988.

If you have any questions, please call Mr. Scott Hugenberger at the above number.

Very truly yours,


LADIN H. DELANEY
Executive Officer

SGH:sgH

cc: Mr. Joseph Kenny
Nachant Environmental Inc.
P.O. Box 8098
San Diego, California 92102

Mr. Kevin Heaton
Hazardous Materials Management Division
County of San Diego Department Of Health Services
1700 Pacific Highway
San Diego, California 92101

P-493 255 524

Frank Fossati, Sr. Area Engin.
Shell Oil Company
P.O. Box 4848
Anaheim, CA 92803

5/29/87

P-493 255 524

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery.

3. Article Addressed to:

Mr. Frank Fossati, Sr. Area Engin.
Shell Oil Company
P.O. Box 4848
Anaheim, CA 92803

4. Article Number

P 493 255 524

Type of Service:

☐ Registered

☒ Certified

☐ Express Mail

☐ Insured

☐ COD

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature — Addressee

X

6. Signature — Agent

X

7. Date of Delivery

JUN 1 1987

8. Addressee's Address (ONLY if requested and fee paid)

P-493 255 524

RECEIPT FOR CERTIFIED MAIL

Frank Fossati, Sr. Area Engin.
Shell Oil Company
P.O. Box 4848
Anaheim, CA 92803

5/29/87